

What is claimed is:

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- 1 X. A method for developing a graphical device management application  
2 comprising:  
3 creating a graphical component using a graphical programming language;  
4 associating the graphical component with a device configuration command;  
5 linking the associated graphical component with a console user interface  
6 (CUI) and a configuration kernel (CK), the CUI and CK having code for  
7 configuring a remote device according the device configuration  
8 command; and  
9 building a graphical user interface (GUI) from the linked graphical component,  
10 the CUI and the CK.
- 1 2. The method of claim 1 wherein associating the graphical component with a  
2 device configuration command is performed using a macro.
- 1 3. The method of claim 1 wherein creating a graphical component comprises  
2 adding a control to a dialog.
- 1 4. The method of claim 1 wherein building a GUI comprises compiling the linked  
2 graphical component, the CUI and the CK on a general purpose computer system.
- 1 5. The method of claim 1 wherein building a GUI comprises interpreting the  
2 linked graphical component, the CUI and the CK on a general purpose computer  
3 system.

1 6. An apparatus comprising:  
2 a configuration kernel (CK) having code for configuring a device from a  
3 configuration;  
4 a console user interface (CUI) having code for updating the configuration;  
5 a graphical user interface (GUI) having code for receiving an update to the  
6 configuration in response to a user action; and  
7 a communications mechanism for communicating the received update from  
8 the GUI to the CUI, for communicating the updated configuration from the CUI to the  
9 CK, and for communicating the device configuration from the CK to the CUI and  
10 from the CUI to the GUI.

1 7. The apparatus of claim 6 wherein the code for configuring a device comprises  
2 at least one of a variable, a data structure and a function.

1 8. The apparatus of claim 6 wherein the code for configuring a device resides in  
2 a library linked to the CUI and the GUI.

1 9. The apparatus of claim 6 wherein the code for updating the configuration  
2 comprises at least one command of a command set.

1 10. The apparatus of claim 6 wherein the code for updating the configuration  
2 resides in a library linked to the CUI and the GUI.

1 11. The apparatus of claim 6 wherein the code for configuring a device is a  
2 reusable firmware, the reusable firmware having been originally coded for operation  
3 on the device.

1 12. The apparatus of claim 6 wherein the code for updating the configuration is a  
2 reusable firmware, the reusable firmware having been originally coded for operation  
3 on the device.

1 13. A computer-readable medium comprising computer-executable instructions  
2 for performing:  
3 creating a graphical component using a graphical programming language;  
4 associating the graphical component with a device configuration command;  
5 linking the associated graphical component with a console user interface  
6 (CUI) and a configuration kernel (CK), the CUI and CK having code for configuring a  
7 remote device according the device configuration command; and  
8 building a graphical user interface (GUI) from the linked graphical component,  
9 the CUI and the CK.

1 14. The computer-readable medium of claim 13 further comprising computer-  
2 executable instructions for performing associating the graphical component with a  
3 device configuration command using a macro.

1 15. The computer-readable medium of claim 13 further comprising computer-  
2 executable instructions for performing compiling the linked graphical component, the  
3 CUI and the CK on a general purpose computer system.

1 16. The computer-readable medium of claim 13 further comprising computer-  
2 executable instructions for performing interpreting the linked graphical component,  
3 the CUI and the CK on a general purpose computer system.

1 17. A method of configuring a networked device using a workstation comprising:  
2 initializing a graphical component associated with a configuration command  
3 to a corresponding state of a configuration kernel for a remote networked device;  
4 displaying on a window of a remote workstation, the initialized graphical  
5 component;  
6 receiving an update to the configuration command from a user action on the  
7 associated graphical component;  
8 passing the updated configuration command to a virtual console; and  
9 updating by the virtual console the state of the configuration kernel with the  
10 passed updated configuration command.

1 18. The method of claim 17 further comprising:  
2 determining whether the updated configuration command is interdependent  
3 with a second configuration command, and if so refreshing the graphical component  
4 associated with the configuration command to reflect the updated state of the  
5 configuration kernel.

1 19. The method of claim 17 further comprising:  
1 uploading the updated state of the configuration kernel to the remote  
2 networked device.